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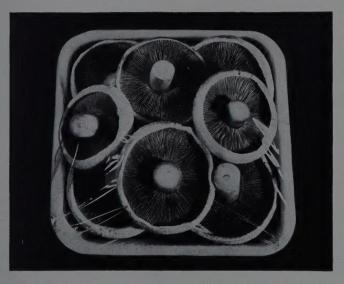
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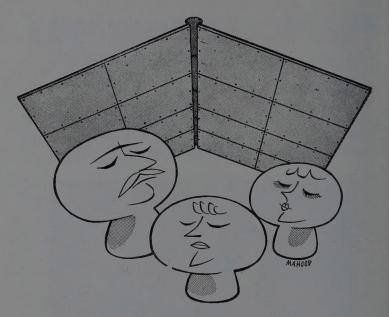


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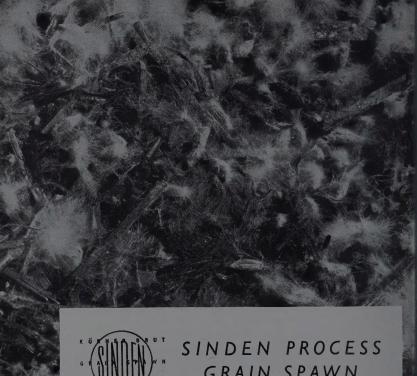
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EDITORIAL

NOT ALWAYS GREENER

A long time ago, in one of the Bulletin editorials, I urged mushroom growers large and small to count their blessings instead, as is common with so many who earn their living on or by the land, to count, out of all proportion, their losses.

It is one of the most extraordinary traits of human nature—and never let it be said that mushroom growers aren't human—to emphasise the bad luck, the ills and the complaints and to play down the good fortune which, by and large, comes to all of us in pretty well equal parts. Thus, each and all of us do derive some comfort, no matter how much we may deny it, in the fact that somebody else's crop is worse than our own and somebody's prices from the market were that much below our own returns.

All of us should realise, once and for all, just how selfish we really are, for all of us, first and foremost work, not for the common good but for our own personal good, our own comfort and our own well being. Only when that is established do the majority of us think of the other fellow and of the community at large and only then do we really extend the helping hand. There is nothing new in this at all, nothing either which is confined solely to mushroom growers. It is so in all walks of life—in fact that is life. Only now and again do any of us come across real acts of nobility and selflessness.

In this, the worst year within memory for farmers and horticulturists as a whole, let us in the mushroom growing world pause, if only for a short while, and count our blessings instead of our losses. Let us spare a thought for those whose corn harvests have suffered ill, let us spare a thought for those, in the horticultural industry whose crops have been exposed to the elements and who have had to stand by, quite helpless, whilst nature, at her worst has done her worst. Let us give thanks that our crop, unlike so many others, has been sheltered from the stormy blast other than the blast of economics which is of our own making.

All of us would do well to remember that the grass is not necessarily greener on the other side of the street and that the man round the corner is not better off than we are. Posed against the background of what many others have suffered and are suffering in this year of devastation the problem of the mushroom grower, very real though it certainly is, is equally certainly no worse than that of thousands of others. Indeed there are many who think that in spite of this year's low prices, things are by no means as bad as they may seem on the surface and there are indications of better times to come for those who carry on.

WRA

PUBLICITY NEWS

Activity continues on the publicity front and, during the past few weeks mushrooms have been prominently displayed in a number of places, sold loose and in pre-packs, specially featured at cookery demonstrations and provided a somewhat striking display at the International Exhibition on the Pre-packing of fresh fruit and vegetables at the Royal Horticultural Society's New Hall, Vincent Square, London, S.W.I, early this month.

Miss Doreen Davies, the well-known Home Economist, demonstrated with mushrooms at the Ideal Homes Exhibition in Bristol where Mr. W. V. Batemen of Parkwall Nurseries Ltd., Willsbridge, Bristol, kindly arranged the supplies. It was Miss Davies too who, in conjunction with Demonstration Service Co. Ltd., gave a similar demonstration at the Bradford Ideal Home Exhibition where Messrs. Emsley & Collins (Bradford) Ltd., the well-known firm of salesmen, co-operated in the matter of regular supplies of fresh mushrooms.

Like co-operation was received from Messrs. Francis Nicholls Ltd, of Birmingham on the occasion of the Birmingham Flower Show last month when there was a fine display of mushrooms included in the NFU Market Produce Society's exhibit.

At the Food Fair at Olympia last month, again with the cooperation of the NFU Market Produce Society, and at no cost to the Association other than the one guinea membership fee, hundreds and hundreds of mushroom pre-packs were sold to the general public. Growing mushrooms in trays kindly supplied and delivered by Mr. A. J. Berry, Chairman of the MGA Publicity Committee, once again and as always, proved the focal point of public attention.

Lewis's of Hanley, Stoke-on-Trent, staged yet another "Mushroom Week" at their store last month and this time it was Marigold Nurseries Ltd., of Great Bowden, near Leicester who most generously made a cross country trip by car, on a Saturday morning, to deliver trays of growing mushrooms for shop window display. A round trip this of about 125 miles without charge to the Association for trays or for the long journey.

Next month there will be reports on the Bournemouth Exhibition, Conference and Publicity and of the Pre-packing exhibition effort. Fred. C. Atkins talks about

A VISIT TO THE UNITED STATES

I have been unhappy for several years over the general quality of the mushrooms marketed in England, and I took the opportunity of my recent visit to the United States of America to ask a number of people for their views on what factors determined quality. At one of the large canneries I was given to understand that "the first quality-control step is picking the mushrooms with the root attached and while the veil is still firm; mushrooms picked in this manner retain their freshness".

This idea is common enough in Europe, of course, although I am told that progressive elements have weaned the Swiss growers from such a primitive practice. Markets in Britain, as we know to our cost, have gone even further and seek to abolish the stalk altogether, as something somehow indecent or at any rate inedible. I suggest we explain to the wholesalers and retailers that the tissue of the stalk is identical with that of the cap.

In general I found that American-grown mushrooms were small by our standards; and I was informed that, as nearly two-thirds of the crop went to the canners, and as the canners demanded small mushrooms, small mushrooms it had to be. From another source I learnt that "second flushes with much smaller mushrooms are usual throughout the industry, and this is why so many are sold to the canners; they are a nuisance to pick, but they fetch the highest price".

Whatever the truth—and both viewpoints may be true—it was difficult to probe too deeply, for the canners stand on the same magisterial plane as our spawn people occupy (or used to).

On only two plants in the States did I meet growers who had eliminated "second-flush marbles"; both were jubilant, although one was also a canner, and both attributed their success to lowering their cropping temperatures to the 52-55° F. range.

The better quality might have been due to the lower cropping temperature resulting in a slower, sturdier growth, as some contend, or to the correspondingly reduced respiration of toxic gas or gases making fewer demands on the cropping environment.

These growers were operating a system of air-conditioning which might have enabled them to produce first-class mushrooms at more orthodox temperatures. But they were both content with a longer cropping period than is fashionable among those of us here who are chasing our tails like mad things; both ran a fleet of Cadillacs, and neither was obviously neurotic

Now I have seen large, magnificent mushrooms grown at 50° F. in France and at 70° in South Africa; and from time to time I see them in England at most of the intermediate temperatures. So it would be as misleading to suggest that temperature alone governs quality as it would be to say it exerts no influence.

I decided to content myself with a generalization which subsequent thought has left unaltered: That the higher the cropping temperature the greater the demands on the environment, and vice versa.

It may sound elementary to state that AIR is a profoundly important constituent of the environment, but some of us tend to pay insufficient attention to the fact. Rasmussen will be speaking in Copenhagen next July on his current research in this field, and I must not anticipate beyond stating that much more air movement than most of us dream of giving may be desirable.

I was fortunate in spending several days with Dr. E. B. Lambert, the doyen of mushroom researchers, and I found him very interested in the optimum rate of air flow over mushrooms at different humidities. He showed me photographs of mushrooms leaning into the wind. I have often noticed mushrooms at Yaxley bending towards the light, but Lambert's studies suggest the phenomenon is due to the fact that our bottom ventilators are situated immediately below the windows. Draughts evidently dry the exposed side of stalk and reduce or halt growth on that side, causing the mushroom to lean over, for the leeward side continues to grow normally.

This was interesting; truly startling was an astonishing photograph of giant mushrooms grown in conditions of alternating ventilation—the house closed for 16 hours and then opened for 8 hours, over a long period.

Another thought-provoking discussion we had at Beltsville arose out of talks on peat. I was several times asked by growers and research workers to describe our revolutionary abandonment of soil, which in the States often gives rise to panning problems. "It has been neither proven nor disproven", said Lambert, "that any importance can be attached to the porosity of the casing material after rhizomorphs have filled the soil". He and Dr. T. T. Ayers believe aeration of the compost through the casing layer is of little importance after the first flush has appeared. "Only if the casing pans, or is sealed off before the first pinheads develop is any harm done", they say; "but then the harm persists through the crop".

One of the personal decisions I reached in the States was to concentrate more on the air in our mushroom houses. Lambert and others had commented favourably on the paper Tom Figgis had read at our Southport Conference; I knew he was toying with the idea of doing a little consulting work in this field, and I am pleased to be the mushroom grower who gave him his first commission. Discussions with him too, have been stimulating, and I think the mushroom industry here is fortunate to have someone of his calibre available for consultation on ventilation.

If we are successful in improving the quality of our mushrooms, how can we insure that they reach the shops in good condition? You have all no doubt been studying the occasional reports in the States on the washing of mushrooms. Possibly because I went in June I saw no-one washing mushrooms, but there is widespread interest in the idea,

and I learnt that several growers are now washing commercially. Some have met with difficulties, and the Universities of Delaware and Missouri are continuing their studies: success may be just around the corner.

One company, Ron Jon Incorporated, claim that their Ronjonite is the best formulation to date, and plan to market it in this country. I was in touch with them before I went to the States, and when I met the Directors during the Short Course I advised them to preface their launching of Ronjonite with some extended trials over here. These trials are now in progress.

The rapid drying of the mushrooms immediately after washing has been a major problem which I believe is now solved. Delaware and Missouri are not altogether happy about sodium bisulfite and sodium chloride, their most successful washing agents to date. Delaware now has a formulation greatly superior to these, but its active ingredient is thiogylcerol, the use of which is forbidden by the American Food and Drug Administration, at least until toxicity data are available.

A great deal of canning goes on in the United States, of course. More than half the crop is put into cans, and another 15 per cent. or more reappears as soup. With the MGA's processing possibilities in mind I visited a number of canneries to see whether in fact only the best quality was acceptable. Naturally the canneries had come up against the problem of how to utilize the stalks and open or broken mushrooms which sometimes appeared in consignments and did not fit into the recognized first-grade categories.

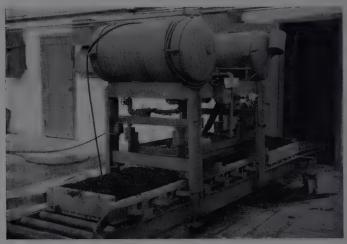
These odds and ends are now chopped up and canned as "Stems and Pieces". Curiously this label is now a best-seller, possibly because it is the cheapest and possibly also because the taste may be more definitely "mushroom". A substantial demand exists for it, and we should bear it in mind. We can sell all our best stuff on the fresh market, for we are not confounded by the immense distances which face American growers.

But I was more than shattered by the capital and running costs of canneries. It was not long before I realised that the £50,000 referred to in the March MGA Bulletin was hopelessly inadequate; and on information given me in confidence which I was permitted to divulge only to the MGA Executive I now believe that half-a-million pounds is nearer the mark.

Processing, as opposed to canning, may be a very different matter. New ways of processing mushrooms can be devised, and new markets found, though perhaps slowly and on a limited scale. In any event we must tread cautiously, and that is why the MGA Executive is asking you to complete and return the rather complicated questionnaire which reached you a fortnight ago.

As was to be expected, some American growers do things in a very big way. I saw some first-rate handling machinery: Giant composters, a worm-fed elevator which filled a 10-ton truck with compost in six minutes (or a 6-ton truck in 10 minutes—does it matter?), 32 h.p. mobile steam raisers, 35 h.p. whole-bale shredders, conveyor belts in

series to empty and fill and case houses, axial-flow dust blowers, and so on. I will show you some pictures in a moment.



A Compost-firming device in use at the Boy-Ar-Dee Plant

(Photo: F. C. Atkins)

High wages, the American genius for mechanization, and the cost of these machines, have led to a development which should be watched closely over here. I am referring to a phenomenon known as "custom composting". A Linfield turner at over £4,000 is beyond the reach of most of us, and of most American growers. A similar machine developed in Sweden is now available in this country, but import duty lifts its price to the £3,000 level, and that too is a lot of money. But how else can we substantially reduce our composting-labour costs if machines such as these cannot be afforded? The Americans have found one solution.

I looked in on the enormous composting site of the Interstate Co. in Pennsylvania, which is one of several firms which now "custom compost", i.e., prepare compost for customers at a price delivered which is cheaper than the customer can make it himself; and it is probably a better compost in the bargain.

This is rapidly becoming big business. It is unnecessary to point out the danger to the smaller grower's independence, but groups of growers here might usefully consider communal composting with labour-saving machinery too costly for any one of them to purchase for his own exclusive use.

One of my biggest thrills was a day at the Yoder Brothers' West Winfield mine. For the first two turns of the loosely stacked compost

the mammoth Yoder turner was used with grab loaders, and then the Linfield self-feeder took over. Efficient Barber Greene loaders put the compost into lorries, and these tipped the compost into chutes leading to a tray-filling machine standing below.



A whole-bale Shredder operated by Yoder Bros.
(Photo: F. C. Aikins)

The 30 sq. ft. trays were filled, levelled and firmed automatically and conveyed by powerful fork-lift trucks, seven at a time, to the pasteurizing rooms. 15,000 sq. ft. of trays is filled daily, spawning is "throughout", and the trays are cased 21 days after spawning. Girl pickers work in teams under a foreman and average 40 lb./hr.

At the end of cropping the trays are removed on fork lifts, placed one by one on a staging which automatically swings through 180 degrees to drop its contents into trucks waiting below. The empty trays are then re-stacked and carried off to be filled again within a few minutes. The co-ordination of these operations was marvellous.

The Yoder plant was only one of several which had splendid facilities for research, and I applaud the plan at Penn. State University to feed

the mushroom industry with graduates who have been trained in the ways of research on mushrooms. A similar idea has almost certainly occurred to Mr. Toovey at Littlehampton; but would our industry engage such young men as eagerly as do American plants? I think we would; I think no efficient farm of 50,000 sq. ft. or more could afford not to.

My visit to the Knaust Brothers in New York had a dreamlike quality. This fabulous family greeted me with the enthusiasm of old friends, and, at a jog trot, I saw and talked of many things. They "compost" for only two or three days; the composting proper takes place in the heat rooms. Lambert's two-phase pasteurizing ideas are followed closely, and particular stress is laid on the encouragement of the *Torula* mould.

Herman Knaust I had not met before, but he spoke openly of his Silo Scheme. Blueprints were spread over desks and the theory propounded in detail. For some years they had been merely wetting and mixing their material by several quick but expensive turns before filling the trays. Why not cut it out altogether? It seemed a logical development.

In the Silo Scheme the various dry "synthetic" ingredients were to be delivered to a battery of silos poised over a worm conveyor which would mix them throughly as they were carried along. The final silo would contain straw, chaffed to permit it instantly to absorb three times its own weight of water. At the end of the conveyor the homogeneous mixture would be poured into trays, to be firmed automatically and run into pasteurizing rooms alongside.

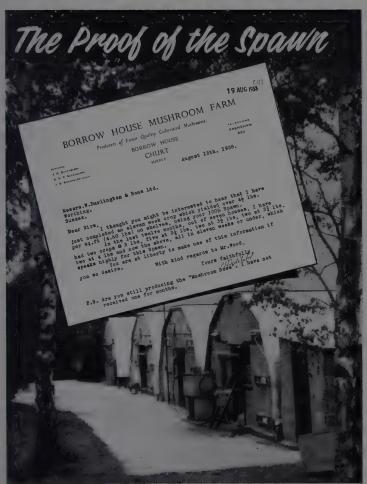
It all seemed like a dream; but so did the Tray System a quarter of a century ago when they patented it. And the Silo Scheme is calculated to reduce a 48-man composting force to one technician pushing a few buttons on a master control panel

NEWS FROM AUSTRALIA

Mr. L. O'Connor of Lugarno Mushrooms, New South Wales, Australia in a letter dated 10th September, writes to say that mushroom prices in Australia—on the fresh market at Sydney—have shown a marked drop on previous years' returns, sterling prices varying from 2/5d. to 4/4d. per lb. against 4/10 to 6/- over the previous three years. There were glut prices of down to 1/7d.—1/9d. the previous September causing a number of growers to leave the industry.

The Sydney canners are paying 3/- to 3/5d. per lb. this year.

On a rather brighter note Mr. O'Connor adds that his own firm is using synthetic compost for 75% of their crop and are obtaining better yields than from horse manure. Australian peat is used for casing.



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At the General Meeting of the French Mushroom Growers' Federation, M. Zinetti, President of the Federation, expressed very strong views on the present state of the mushroom industry in France.

Since the Federation's last meeting the canners had approached the growers saying that they should proceed hand in hand. The growers replied that their hand had been offered in co-operation four years ago, the canners had preferred to let them fight (their publicity campaign) alone. But this time the canners had made the advance, and he thought it was genuine, because it was in their interest to save the growers.

Retracing the history of the publicity campaign, he said that four years ago a joint publicity committee had been formed, and the growers told the canners that they had not joined forces to lower the price of mushrooms; but after each meeting the canners' price for mushrooms fell. Now they had depressed the price below the cost of production, to 170 francs which cannot pay for production. M. Zinetti did not think the growers were helpless. Even abroad they could compete on price. They exported at a reasonable price although they were told that they no longer exported, that they could not supply, etc. Personally he did not believe a word of it.

In any case if they did nothing, they would be smothered, and if they did not defend themselves against the well known complaint which threatened them, it would soon be too late. They would reach the state of some other trades which had almost disappeared.

There used to be 300 plasterers, now there were only about five; there used to be thousands of (wholesale) wine merchants, now there were only a handful; wine was sold in whole batches which only large combines could buy, and wine sold by the producers for 35 francs was 110-120 francs retail.

He was not usually a pessimist, but he was not exaggerating when he said that their market was in danger, and the people responsible for the present situation seemed to form a serious threat to the growers. He had been told by older growers that there had been crises before, but what had been true in 1910, 1915, 1930, might not apply now.

There was only one solution, once and for all they must recognise that union is strength. They had the chance to act, and they must not miss it, but discipline would be necessary even among themselves. It was no use asking what the Committee was doing: if they wanted the Federation to save them, what were they doing about it themselves?

They were asked to pay an increased subscription, but only one franc per kilo of mushrooms. He estimated that their 600 grower members had lost on an average 1 million francs each in the last few months, so they could easily afford that subscription.

^{*}Translated from French Mushroom Growers' Federation Bulletin by Dr. R. L. Edwards.

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He thought the solution to their problem lay first in their own hands. Any grower who refused his spawn makers' request to pay this subscription (of 8% on their spawn bill) was a criminal against his fellow members.

Now there was only one way; they must handle all stages from production to sale. If the growers entrusted selling to middle-men they might not always be well placed or interested. It would not need much to make holders of stock nervous, so that they would cut their prices; also the grocers seeing the fall in price had stopped buying, and this was where the largest stock was found.

They should increase the effect of the law of supply and demand. The supply was always the same when it was well managed, but demand must always be watched; they must defend themselves.

Two million francs were spent on publicity for agricultural products this year. They could do something, even with their limited funds, if they were of one mind. They must not stop there. They must always try to produce the best quality, which some of them did not appreciate.

There is the problem in a nutshell, the growers must become masters of the situation, and for that they must be united.

M. Zinetti said he had spoken of a co-operative cannery. Many were frightened of the word "co-operative", because their organisation might be a delicate matter, but he thought the formation of three or four factories would be a step, or if one or two or three growers started canning on their own, there was nothing in the world to stop them. They might work better in that way than in a large factory, and would be well able to supervise the processes.

Co-operative canning and sale of the canned produce should not be an insoluble problem. If they were to solve their marketing problem, even for fresh mushrooms, they must combine it with canning. If they started even a few small canneries, the canners would hesitate to reduce their purchase price, and so the growers would have started to defend their market.

It was not easy to tell producers to become salesmen, they would have to learn and it could not be done in a day, but nevertheless it was necessary.

The two marketing problems, of fresh and canned mushrooms, could both be tackled, but they must start now, and not discard these ideas after the meeting.

The Federation proposed to form a National Co-operative which would arrange group selling. They would be well situated for exporting, there was plenty of demand.

A meeting would be held on the following Saturday to hear their proposals, and two growers with small canneries had agreed to join them. The publicity programme being prepared would include canned as well as fresh mushrooms.

After a long discussion the growers present agreed unanimously to pay this publicity subscription. Members were asked to confirm their consent in writing.

The subject was again discussed at a further meeting of the Committee of the Federation when a formal proposal was received from the Canners, that a Joint Co-operative Society should be formed with a capital of 10 million francs, to promote and stabilise the production of mushrooms in all forms.

During the discussion M. Sarazin said that with modern methods France could compete with the rest of the world; production was rising steadily, consumption in France could be increased by publicity, but this could not absorb all the mushrooms now being produced. They must export; however, their mushrooms had been discredited abroad because some exports had been of poor quality. He would like to see effective control of quantity, quality, and price of exports.

This subject was discussed and it was stated that there is already strict control, but others considered it insufficient.

After the discussion, the Committee agreed unanimously to agree to the proposed formation of a joint committee.

At a meeting with representatives of the canners, which followed, it was found that the objectives of the two groups were different. The canners wished to form a Joint Co-operative Society, which under French law would be concerned only with financial and commercial aspects of the mushroom industry. The growers wished to form a Joint Committee which would deal with all aspects, including control of quality, approved labels, production problems, research, as well as distribution and publicity. The canners did not think such a Joint Committee necessary. It was stated that if only a Joint Co-operative Society was formed it would have to be attached to a Joint Trade Committee, in this case the one dealing with Fruit and Vegetables, if a separate one was not formed for mushrooms.

The main objects of a Joint Co-operative Society would be:

- 1. To use money from the Mutual Guarantee Fund for publicity to help export of fresh and canned mushrooms.
- 2. To raise funds for publicity both in France and abroad.

The canners were asked to promise that if they derived benefit from the formation of a Joint Co-operative Society, they would pass on part of the benefit to the growers. It was stated that an increase in the selling price of canned mushrooms would automatically be reflected in a rise in purchase price, but this was questioned by some growers.

It was suggested that in return for help canners were to receive in connection with their export trade, they should give growers a guaranteed minimum price. They undertook to consider this.

After discussion it was agreed to form an *ad hoc* committee to prepare the formation, first of a Joint Committee, and then of a Joint Co-operative Society.

Translator's note. There are not exact British equivalents of some of the French organisations mentioned in the above report. The following terms have therefore been used in the translation.



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Co-operative Society: similar to our own co-operatives, formed by any group of growers or other traders wishing to operate together for their mutual benefit.

Joint Co-operative Society: a body whose constitution is fixed by French law, which can only be formed with Government approval, and is concerned with financial and commercial matters only.

Joint Committee: a body which must include representatives of all sections of the industry, including 50% of growers, with a grower as Chairman. It is concerned with all aspects of the industry, production, research, distribution, processing, quality control, labelling, publicity, etc.

. . . .

POLISH MUSHROOM GROWERS' ASSOCIATION FORMED

Organised by Mr. T. Bukowski, who is a member of the MGA, the first-ever meeting of Polish mushroom growers took place in Warsaw, on 1st September.

This meeting was attended by 85 growers representing almost all the growers in Poland. Mrs. Helena Nagel, Vice-President of the Polish Gardeners' Union, opened the meeting and extended a warm welcome to all the delegates. The election of officers followed a unanimous decision to form the new Association and those elected were:—Chairman, Mr. Bukowski; Directors, Mrs. Nora Krusze, Mr. St. Zach and Mr. M. Maciaszczyk with Mr. A. Swiderski as Secretary.

"Experiments with Casing Soil" in the state enterprise of "Las" was the subject of an interesting lecture by Mr. Kwiatkowski and Mr. Bukowski's lecture on "Pig manure as a new base for mushroom compost" also created much interest. A two hour discussion followed

the lectures.

The afternoon session opened with another lecture by Mr. Bukowski on "Modern mushroom growing" illustrated by the excellent film in colour taken by Esso at the Broadham Produce Co's. farm at Oxted, Surrey, England. Many members took an active part in the subsequent discussions.

It was resolved at this meeting to (1) increase publicity, (2) keep in touch with mushroom growing associations abroad and (3) to appeal to the Polish Ministry of Agriculture to initiate research on mushroom growing in order to produce more efficient crops on the plantations Poland already possesses.

Mr. Fiedler, President of the Gardeners' Union, present at the afternoon session, thanked the delegates for their attendance and for

their lively participation in the discussions.

This meeting commenced at 10 a.m. and did not conclude until 9 p.m.

. . . .

CORRECTION

F. C. Atkins writes: In the third paragraph on p. 347 of MGA Bulletin 105 (Sept./58) I gave the weights of compost in pounds per sq. ft. I should have written pounds per tray. My apologies to Mr. Bovenkerk and to all of you who read the Bulletin.

You can make better compost more quickly and reliably-with ADCO 'M'

SPECIAL MUSHROOM COMPOST ACTIVATOR GIVES
HIGHER FERMENTATION TEMPERATURES, AND A FIRST
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Secondly, you have greater assurance that your crop will be free of pests and disease. The higher temperature either kills off the pests inside the heap or drives them to the surface, where they can be dealt with by insecticides. High temperatures during fermentation are particularly vital in preventing disease such as Vert-de-gris, of which there is special danger when composting during the winter months.

More nourishment

If you use Racing Stable manure, or other manure in which excess straw is present, the use of Adoo "M" is strongly advised. The fermentation of this type of manure takes place more rapidly and effectively when Adoo "M" is added. You get a more thorough breakdown of the strawy material, which then becomes available as food for the growing spawn. So your compost provides more nourishment for the mushrooms, and you get a bigger crop.

Better spawn run

Adco "M" produces a good quality compost of even texture. It provides an

ideal medium for spawn run and helps to avoid greasy conditions, lack of aeration, and over wet compost – all of which delay mycelium growth. The spawn is able to make more rapid use of the food provided, It establishes itself more quickly and this is again a great help in preventing diseases and weed fungi. The faster the spawn grows and fills the compost the less likelihood is there of disease and weed fungi becoming serious competitors. A quick spawn growth also gives a quicker ultimate production.

You can have freedom from uncertainty in the composting process – by using Adco "M". It will pay you hands down. Adco "M" is specially formulated as a result of years of experiment, for the specific purpose of making mushroom compost. It can be used for composting with straw alone, if you wish. Or it can be used to compensate for variations in the quality and texture of your manure supply. Adco "M" provides the way to better mushroom compost every time.

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WORLD'S PRESS DIGEST

Mushrooms are a slightly improved trade, with the best buttons making up to 4/- per lb. but opens as low as 1/9d. (Grower, July 26/58). Mushrooms are a bad trade, in spite of good quality (Fruit Trades' Journal, August 2/58). Less mushrooms are available this week, but prices do not reflect the shortage, probably because the weather is not helping demand (Fruit Trades' Journal, August 9/58). Supplies of mushrooms have fallen off slightly, with the result that prices are maintained with improved demand (Fruit Trades' Journal, August 16/58). Less mushrooms are available, and prices rise slightly (Fruit Trades' Journal, August 23/58).

When everyone is busy increasing his area faster than demand can be stimulated, we are all simply having to work harder for less profit. Without putting up one new house last year my company's output was

increased by 10,000 pounds but income fell 1,500 dollars.

Fred. C. Atkins in Pennsylvania Packer, July/58.

Too many mushrooms are coming on to the market to sustain a reasonable return to growers. The solution must be (1) to control production and (2) to get a working arrangement with the retailers so that price reductions are passed on, with a view to widening the demand. We advise the MGA to seek an understanding with the spawn manufacturers. Nobody can grow mushrooms without spawn, and the producers are few. While they may derive joy from selling a lot more of their product for a couple of years, this joy would be knocked sideways if dozens of mushroom growers then went out of business. So it could be to the benefit of the industry to set up a joint committee to consider new and increased orders for spawn, and reach an agreed decision on how much expansion should go on.

Grower, August 9/58.

Tomato plants raised entirely under artificial light have proved so successful in experiments at Wageningen, Holland, that many Dutch growers intend to adopt the system next season. Plants in the shed are grown on shelves in much the same way as in a mushroom house.

Grower, August 9/58.

I see that the Red Seal mark of Cyprus Sultanas has a very decorative **price ticket** in every tray. If one packer can do it, why can't others?

Alec Blacke in *Fruit Trades' Journal* August, 9/58.

"Scientific experiments have proved that the vitamin content of fruit and vegetables is not affected by deep-freezing", Wallace Smedley assured me. Egon Ronay in Daily Telegraph, August 6/58.

Murphy Chemical Co. and Pan Britannica Industries have been working together on the development of vapam, a soil sterilizer from America.

Grower, August 9/58.

A new soil sterilizing liquid is introduced this week by Plant Protection.

Commercial Grower*, July 25/58.

A giant new variety of wheat which grows nearly 5 ft. tall and stands up to the worst storms of an English summer will be offered to farmers next year.

Daily Express, August 12/58.

Dissatisfaction with the contemporary loaf is "pretty general", writes Mr. Ronald Sheppard, the editor, in the current issue of Bakers' Review. "Exactly what is wrong no-one seems to know. Do the public really want to go back to the bread of grandmother's day, whatever that was? Or do they want something entirely different, such as loaves made from rye flour instead of wheat?" Sunday Times, August 17/58.

A simple and efficient electrically operated portable mixer of spray chemicals with a capacity of up to 50 gallons has been developed by Premier Colloid Mills Ltd., of Walton-on-Thames, Surrey. Designed to overcome the wastage caused by blocked spray lines and uneven application due to the insolubility of many spray chemicals, the Premier Agricultural Mixer 2300 is completely portable.

Commercial Grower, August 8/58.

Designed for 10 cwt. loading, the new electric battery driven pallet truck introduced by Wessex Industries (Poole) Ltd., Poole, Dorset, is suitable for use in confined spaces and has a number of small chassis and body designs.

Commercial Grower, August 8/58.

The Financial Times states that the grocer's average mark-up should be 16 per cent. on groceries and provisions. He should aim to boost his margins by selling fruit and vegetables carrying a mark-up of some 24 per cent.

Packaged Food Selling, August/58.

Most striking of the Paris lines is Pierre Cardin's mushroom silhouette, a slender brief sheath, barely knee length, easy around the hips and with a hint of fullness in the back above the indicated waistline. The top of the mushroom bursts out in an enormous cutaway cape and gathered bolster collar that folds back over the shoulders.

Winefride Jackson's fashion note in Daily Telegraph, July 29/58.

The cause of dusty concrete floors is the breaking up of the soft carbonate of lime particles in the concrete; under heavy wear and the strain of traffic they become pulverized into dust. If the life of the floor is to be prolonged it is essential that these lime particles should be hardened and proofed, and Tretol Fluat Cement Hardener effects a permanent cure by direct chemical action. The soft particles are transformed into extremely hard and chemically inert crystals, forming a floor surface permanently free from "dusting" with increased resistance to oils.

Techniview, August/58.

As a mushroom grower of some years standing I receive many inquiries from people who want to take up the business. I tell them that four out of five who start on their own account are out of it in three years. I advise them to spend two or three years working on mushroom farms learning something of the pests and diseases which can put them out of business in a few weeks.

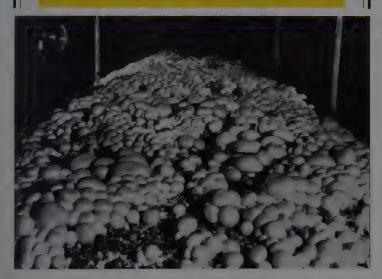
Raymond Thompson in Evening News, July 14/58.

My own experience is that **machinery**, both new and second-hand, requires frequent attention or repair and skilled mechanics. My advice to a beginner about to purchase machinery is to go and see his *nearest* horticultural machinery agents and obtain particulars of machines they

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stock, service and repair. Before making any purchase, call on the Machinery Officer of the NAAS and obtain his opinion on the equipment you require.

Devon Grower in Commercial Grower, August 8/58.

We feel very strongly that now is the time for the leaders of this new industry of **prepacking** to get together, draw up a code of conduct, form a Prepackers (Fruit & Veg.) Federation and eventually issue a list of members who are willing to market their produce under a National Prepack Mark.

Fruit Trades' Journal, August 16/58.

With an annual crop of 8,500,000 lb., Linfields have more than half a million sq. ft. always under cultivation and pick about 30,000 lb. every day. A cannery opened at Thakeham last year has a capacity of 25,000 $7\frac{1}{2}$ -oz. cans a day. Farmers' Weekly, August 15/58.

Optimum depth of the casing layer will vary with type of soil. Too little casing results in excess sheeting of mycelium and yield reduction. Too much casing contributes to both a delay in production and yield reduction. Dr. L. C. Schisler in AMI's Mushroom News, August/58.

It was contended at a meeting of the Howden Growers' NFU Branch, East Yorkshire, that when it had been proved that a marketing board could handle milk—most perishable commodity of all—there should be no great difficulty in handling fruit and vegetables in such a manner that they would reach the housewife fresher and more quickly, and at more reasonable costs, through fewer channels of distribution, Nurseryman, Seedsman, August 21/58.

The swift swing to Capelle Desprez, and the concentration to only a few varieties, is a new feature of cereal farming in Britain and is not likely to be reversed.

Bernard Roberts in Darlington's Mushroom News, July/58.

Some growers of mushroom catch crops in glasshouses did well in the Lea Valley last year, while others were disappointed enough to decide not to grow mushrooms again.

Grower, August 16/58.

A new electrically driven high-pressure washer is announced by Tecalemit Ltd., Great West Road, Brentford, Middlesex, which is suitable for use in industry and agriculture.

British Engineering International, March/58.

The peat is treated by being "smashed up" and soaked with 50 gallons of water per cwt. bale, using the Hawkomatic invented by Mr. Arthur Hawkins himself for mushroom composting. After draining, 40 lb. of calcium carbonate per bale is added. As an experiment to find a more open casing, washed pea gravel and also quarter-inch stones of calcium carbonate are also being added to some mixes.

Two-page illustrated article in Commercial Grower, August 22/58.

The largest city garbage mechanized composting plant in the world is being built by John Thompson Industrial Constructions Ltd., for Bangkok. The composting house is a 6 floored building, the first floor being 9 ft. above ground level and the remaining floor levels being arranged at 5 ft. 3 in. centres. The building is designed so that the

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composting material, delivered to the top floor level and mechanically spread over a series of troughs which form the floor, can be passed down from floor to floor by inverting the troughs. The composting material is thereby automatically turned and aerated, presenting new surfaces for fermentation at each stage of progress downwards through the building until it arrives at the ground floor.

British Engineering International, March/58.

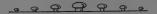
Mushrooms and carnations come by train from King's Lynn under the label of "The Royal Gardens, Sandringham."

Grower, August 16/58.

F.P. AND DR. K.

This month's Calypso briefly relates
What we've got to unlearn from United States;
That hay in composting is now approved
And traces of it no longer removed;
Then Dr. Kneebone went on to teach
To worry no longer about pH:
That overheat causing Olive Green Mould
Is a fallacy, at least so we were told.
But alas! Take heed! We can only guess
How scientists' findings in ten years or less
May quite disagree with his theories to-day—
'Twould also be anybody's guess, by the way,
Reactions from growers feeling somewhat abused,
Chopping and changing and quite confused
As the Phillipina boy, one of a gang,
Who couldn't get rid of an old bommerang.
So place your bets on that end of the horse
And I end this Calypso, before it gets worse.

F.P.





Just a breath of spring in a world which is anything but springlike in the matter of

This Thrush, with her nest in some old mushroom trays (ex C. D. Stretchers) was pictured feeding her young, by Mr. D. N. Dalton of Leigh Mill, Godstone, Surrey.

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Bruises and aerates-does not shred. CAN BE USED FOR ALL TURNINGS. 3 men handle 25,50 tons per day. Waters as it turns. Stacks up to 5 feet. By using the CULVERWELL MANURE TURNER throughout the whole composting process, the work is reduced to the minimum, time taken is shorter with improved results.

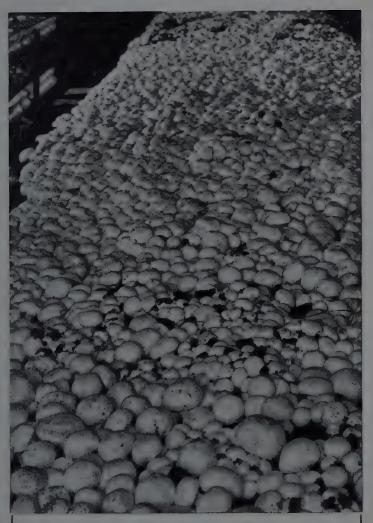
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(zineb)

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(zineb)

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